REMARKS/ARGUMENTS

Claims 1, 3-5, 9, 13-15, 18 and 19 are present in this application. By this Amendment, the specification and claims 1, 9, 18 and 19 have been amended, and claims 2, 6-8, 10-12, 16 and 17 have been canceled. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

The disclosure was objected to due to a number of informalities. The noted informalities have been corrected by this Amendment. Withdrawal of the rejection is requested.

Claims 1, 8-10 and 19 were rejected under 35 U.S.C. §112, first paragraph. Without conceding this rejection, the claims have been limited to the arrangements shown in Figs. 1-3, showing a single layer of polypropylene balls with a diameter substantially equal to the space between the outer metal plates. This was the best mode known to the inventors at the time the application was filed. Applicants assume that the disclosure of alternative embodiments does not amount to concealing the best mode. Withdrawal of the rejection is requested.

Claims 9, 10, 16 and 18 were rejected under 35 U.S.C. §112, second paragraph. Applicants submit that the amended claims more clearly satisfy the requirements of §112, and withdrawal of the rejection is requested.

Claims 1, 2, 6-8, 12, 17 and 19 were rejected under 35 U.S.C. §102(b) over GB 1070874 (GB '874). This rejection is respectfully traversed.

With regard to independent claim 1, the claimed arrangement achieves a combination of advantages including high strength to weight ratio and low cost to manufacture. A significant part of the advantages achieved by the claimed structure derives from the fact that the diameter of the spheres is substantially the same as the distance between the outer metal plates. This maximizes the strength to weight ratio. It has been found that the presence of a continuous layer

of core material adjacent the outer metal plates in prior art structures adds weight without materially increasing the transfer of sheer forces between the outer metal plates. In the claimed invention, one manner of achieving this structure is accomplished by injecting the core material between the first and second outer metal plates. See the specification at, for example, page 5, lines 10-19. Claim 1 recites that the forms comprising hollow polypropylene spheres have a diameter equal to the distance between the first and second outer metal plates. In contrast, GB '874 utilizes a mold including a base board 6 with side walls 7. The spheres 1 are arranged in the mold, and a previously-prepared fluid foam-plastic mix is poured into the mold. Subsequently, a top board or lid 9 is applied across the side wall 7. See page 3, lines 103-114. Since the core material in GB '874 is poured into the mold, Applicants submit that GB '874 lacks at least the claimed core material injected between the first and second outer metal plates. As noted, the injection of the core material amounts to a *structural* distinction that improves the strength to weight ratio of the resulting structural sandwich plate member.

In addition, claim 1 has been amended to recite that the bond strength among the core material and the first and second outer metal plates is greater than 3 MPa. GB '874 is silent with regard to any such bond strength, and for this reason also, Applicants submit that the rejection of claim 1 is misplaced.

Claim 19 defines a method of manufacturing the structural sandwich plate member. The method includes a step of providing first and second outer metal plates in a spaced-apart relationship and a plurality of lightweight forms within the space between the plates. An uncured polyurethane elastomer material is injected to fill the space defined between the first and second outer metal plates and around the plurality of forms. In this context, the Office Action refers to GB '874 at page 3, line 107 – page 4, line 15. As discussed above, however, GB '874

does not disclose the step of injecting the core material into the space defined between the first and second outer metal plates. Additionally, GB '874 lacks the step of providing the plates in a spaced-apart relationship. Rather, GB '874 describes that the spheres 1 are initially arranged in a mold with the base board 6 and side walls 7. The core material is poured into the mold (see page 3, line 110). Subsequently, the top board 9 is applied across the side walls 7. See also Figs. 12-16. As such, Applicants submit that the rejection of claim 19 is also misplaced.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 11, 16 and 17 were rejected under 35 U.S.C. §103(a) over GB '874. In view of the cancellation of these claims, Applicants submit that this rejection is moot. Withdrawal of the rejection is requested.

Claims 9, 10 and 14 were rejected under 35 U.S.C. §103(a) over GB '874 in view of Duke (U.S. Patent No. 5,251,414). Without conceding this rejection, Applicants submit that the Duke patent does not correct the deficiencies noted above with regard to GB '874. As such, Applicants submit that dependent claims 9 and 14 are allowable at least by virtue of their dependency on an allowable independent claim. Withdrawal of the rejection is requested.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the claims are patentable over the art of record and that the application is in condition for allowance. Should the Examiner believe that anything further is desirable in order to place the application in condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Prompt passage to issuance is earnestly solicited.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith

(or with any paper hereafter filed in this application by this firm) to Deposit Account No. 14-1140.

Respectfully submitted,

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